

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

REC'D 15 JUN 2004

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To:

see form PCT/ISA/220

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION See paragraph 2 below

International application No.
PCT/CH2004/000077

International filing date (day/month/year)
10.02.2004

Priority date (day/month/year)
02.12.2003

International Patent Classification (IPC) or both national classification and IPC
A61B5/00, A61B5/05

Applicant
PENDRAGON MEDICAL LTD.

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☒ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☒ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for International preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

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**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/CH2004/000077

Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
 - ☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material:
 - ☐ a sequence listing
 - ☐ table(s) related to the sequence listing
 - b. format of material:
 - ☐ in written format
 - ☐ in computer readable form
 - c. time of filing/furnishing:
 - ☐ contained in the international application as filed.
 - ☐ filed together with the international application in computer readable form.
 - ☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/CH2004/000077

Box No. II Priority

1. ☒ The following document has not been furnished:
- ☒ copy of the earlier application whose priority has been claimed (Rule 43*bis*.1 and 66.7(a)).
 - ☐ translation of the earlier application whose priority has been claimed (Rule 43*bis*.1 and 66.7(b)).
- Consequently it has not been possible to consider the validity of the priority claim. This opinion has nevertheless been established on the assumption that the relevant date is the claimed priority date.
2. ☐ This opinion has been established as if no priority had been claimed due to the fact that the priority claim has been found invalid (Rules 43*bis*.1 and 64.1). Thus for the purposes of this opinion, the international filing date indicated above is considered to be the relevant date.
3. Additional observations, if necessary:

Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

| | | |
|-------------------------------|-------------|---------------------|
| Novelty (N) | Yes: Claims | 1-20,25-27,29,31-35 |
| | No: Claims | 21-24,28,30 |
| Inventive step (IS) | Yes: Claims | 1-20,25-27,29,31-35 |
| | No: Claims | 21-24,28,30 |
| Industrial applicability (IA) | Yes: Claims | 1-35 |
| | No: Claims | |

2. Citations and explanations

see separate sheet

Box No. VII Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

see separate sheet

Re Item V.

- 1 The following document is referred to in this communication:
D1 : WO 02/069791 A (PENDRAGON MEDICAL LTD ; CADUFF ANDREAS
(CH); HIRT ETIENNE (CH); SCHREP) 12 September 2002 (2002-09-12)

2 INDEPENDENT CLAIMS 21 and 24

- 2.1 The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claims 21 and 24 is not new in the sense of Article 33(2) PCT.

Document D1 discloses (the references in parenthesis applying to this document):

A device for measuring a property of living tissue, in particular a glucose level of the tissue (page 3, lines 1-3), said device comprising:

- an electrode arrangement for application to the tissue (page 2, lines 8-10)
- a signal source for generating an AC voltage in a given frequency range to be applied to said electrode arrangement (page 3, lines 33-36 and page 5, lines 3-14), and
- processing circuitry for measuring a response of the electrode arrangement, said response depending on dielectric properties of the tissue, and for converting said response to said property (claim 16 and page 2, lines 2-7, lines 14-19),

wherein said electrode arrangement comprises

- a strip electrode for being placed against said body (page 6, lines 29-32)
- an outer electrode for being placed against said body, wherein said outer electrode comprises two lateral sections extending substantially parallel to and on opposite sides of said strip electrode, wherein a first of said sections is wider than a second of said sections (page 6, line 29 to page 7, line 2 and page 8, lines 24-31).

Claim 21 is therefore not new. The same accordingly adapted reasoning can be applied to independent claim 24 as the insulated substrate and the through-contact as defined in claim 24 are also disclosed by D1 (page 6, line 19 to page 7, line 31). Claim 24 is therefore also not new.

3 DEPENDENT CLAIMS 22, 23, 28 and 30

Dependent claims 22, 23, 28 and 30 do not contain any features which, in combination with the features of the claim to which they refer, meet the requirements of the PCT in respect of novelty and/or inventive step (Article 33(2) and (3) PCT).

4 INDEPENDENT CLAIM 1

4.1 Document D1, which is considered to represent the most relevant state of the art, does not disclose

- an amplifier having an input for a gain control signal affecting a gain of the amplifier and at least one tank circuit comprising at least one voltage-controlled capacitor having an input for a frequency control signal, said frequency control signal determining a frequency of operation of the voltage controlled oscillator
- the device is adapted to control said gain control signal for increasing the gain when the DC-voltage over said at least one voltage-controlled capacitor is close to zero.

4.1.1 The subject-matter of claim 1 is therefore novel (Article 33(2) PCT) and is considered inventive (Article 33(3) PCT), because those arrangements, which allow a moderate supply voltage and power consumption are not suggested in any of the available prior art documents.

4.1.2 Claims 2-8 are dependent on claim 1 and as such also meet the requirements of the PCT with respect to novelty and inventive step.

5 INDEPENDENT CLAIM 9

5.1 Document D1, which is considered to represent the most relevant state of the art, does not disclose:

- at least one diode for rectifying an input voltage and generating a rectified signal,
- a filter for smoothing the rectified signal

5.1.1 The subject-matter of claim 9 is therefore novel (Article 33(2) PCT) and is considered to involve an inventive step as none of the available documents

suggest those elements as defined in claim 9..

- 5.1.2 Claims 10-15 are dependent on claim 9 and as such also meet the requirements of the PCT with respect to novelty and inventive step.

6 INDEPENDENT CLAIM 16

- 6.1 Document D1, which is considered to represent the most relevant state of the art, does not disclose:

- measuring means adapted as defined in claim 16
- fitting means adapted to fit a function in the way defined in claim 16
- means adapted to use the parameters determined by the fitting means to determine the searched property.

- 6.1.1 The subject-matter of claim 16 is therefore novel (Article 33(2) PCT) and is considered to involve an inventive step as none of the available documents suggests the above measuring, fitting and calculating means.

- 6.1.2 Claims 17-20 are dependent on claim 16 and as such also meet the requirements of the PCT with respect to novelty and inventive step.

7 INDEPENDENT CLAIM 31

- 7.1 Document D1, which is considered to represent the most relevant state of the art, does not disclose the steps of fitting a function and then determining a property as defined in claim 31

- 7.1.1 The subject-matter of claim 31 is therefore novel (Article 33(2) PCT) and considered involving an inventive step as none of the available prior art documents suggests the above mentioned steps.

- 7.1.3 Claims 32-35 are dependent on claim 31 and as such also meet the requirements of the PCT with respect to novelty and inventive step.

Re Item VII.

1. The statement "in particular of any of the preceding claims", present in claims 9,

**WRITTEN OPINION OF THE
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AUTHORITY (SEPARATE SHEET)**

International application No.

PCT/CH2004/000077

16, 21 and 24 does not in any way render this claims dependent on the preceding as the "in particular" term represents merely an option.

Therefore, the application contains 5 independent apparatus claims, which render the application not concise.

2. Claim 18 refers to a method "The method of claims 16 or 17" but claims 16 and 17 define devices.